REMARKS

Reconsideration of the application in view of the foregoing amendments and the following remarks is respectfully requested. No claims have been amended, added, or cancelled in this reply. Hence, Claims 1-9, 11-21, 23, and 24 are currently pending in the application.

SPECIFICATION

The Office Action objected to the Title as allegedly not being descriptive. The Title has been amended to be more descriptive. The new title is clearly indicative of the invention to which the claims are directed. Applicant notes that only the Title has been amended in this reply, and the amendment to the Title should not require any further search to determine the patentability of the claims.

CLAIMS REJECTIONS—35 USC 102

The Office Action rejected Claims 1, 4-6, 13, and 16-18 under 35 U.S.C. 102(e) as being unpatentable over U.S. Patent No. 6,493,837 ("Pang").

Claim 1 recites, *inter alia*, "tracking how often said data buffers associated with said data structure are determined to be **full**." In the reply to the first Office Action, the Applicant explained that Pang does not teach or suggest this feature.

In response, the second Office Action alleges, on page 23, that Pang describes this feature in col. 8, lines 1-32. This passage says that each log buffer may contain a time stamp that is updated whenever the log buffer is flushed. The second Office Action alleges that, by virtue of this timestamp, Pang tracks how often the log buffers become full.

However, the timestamp is **not** updated at the time that the log buffer becomes **full**; instead, the timestamp is updated at the time that the log buffer is **flushed** (Pang, col. 8, lines 18-22). According to Pang, the time at which a log buffer is **flushed** does not have anything to do with the time at which the log buffer became **full** (if the log buffer even was full).

A log buffer may be placed in flush list 222 when the log buffer becomes full (although, as is discussed further below, this is not the only way in which a log buffer may be placed in flush list 222). According to Pang, a maintenance thread flushes the log buffers on flush list 222. However, there is no teaching or suggestion whatsoever, in Pang, that the maintenance thread flushes the log buffers on flush list 222 whenever a log buffer is placed in the flush list. Indeed, there would seem to be no point in having a flush list of multiple log buffers, as in Pang, if the flush list were automatically flushed whenever a log buffer was placed in the flush list.

It is clear from Pang that full log buffers may remain in flush list 222, without being flushed, for some time after those log buffers become full. Indeed, under certain circumstances, a log buffer that is in flush list 222 **will not be flushed** even when other log buffers in flush list 222 are flushed and returned to free list 220. In col. 7, lines 2-7, for example, Pang discloses that if a log buffer's reference count variable is not at its original baseline value, then the maintenance thread **will not flush that log buffer**. The log buffer will remain in flush list 222. Thus, the time at which a log buffer is placed in flush list 222 will often (if not always) differ from the time at which that log buffer is flushed. Consequently, the timestamp for such a log buffer would not indicate the time at which the log buffer was placed in flush list 222, even if that log buffer was placed in flush list 222 when that log buffer became full.

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Perhaps even more significantly, according to Pang, a log buffer may be flushed **even if the log buffer is not full**. It is clear from Pang that some of the log buffers in flush list 222 might not be full when those log buffers are added to flush list 222. For example, according to Pang, a log buffer may be added to flush list 222 after a certain period of time has elapsed, **even if that log buffer is not full** (Pang, col. 5, lines 22-26). Because flush list 222 may contain log buffers that are not full, some of the log buffers that get flushed may be log buffers that are not full. When the timestamps for these log buffers are updated to indicate when these log buffers were flushed, the timestamps clearly do not indicate a time at which these log buffers became full (because they never did become full).

Therefore, Pang does **not** teach or suggest that the timestamp referred to in col. 8, lines 1-32 in any way indicates a time at which a log buffer became **full**. Even if Pang tracks how often the log buffers are **flushed**, it does not logically follow from this that Pang tracks how often the log buffers are **full**. It is impossible to determine, from a timestamp that indicates when a log buffer was flushed, the time at which the log buffer became full. There is no connection between the time at which a log buffer becomes full and the time at which that log buffer is flushed.

Additionally, there is no teaching or suggestion in Pang that any comparison is made between a current timestamp and a previous timestamp of the same log buffer. The only comparison that Pang appears to make, regarding the timestamp, is between the **current time** (the time at which the timestamp is examined) and the time that is indicated in the timestamp (col. 8, lines 21-25). The only time that Pang appears to make this comparison is when the log buffer is in free list 220 (col. 8, lines 22-24); thus, the comparison is not made at any time that the log buffer is flushed or about to be flushed.

Although such a comparison may yield an amount of time that has passed since the log buffer was last flushed, it will not yield an amount of time that passed between the last two flushings of the log buffer. Such a comparison cannot be used to determine "how often" the log buffer was flushed.

Additionally, there is no teaching or suggestion in Pang that any comparison is made between the timestamps of separate log buffers in flush list 222. Even if the timestamps of multiple log buffers could somehow be used to track the frequency of some event, it does not logically follow that Pang actually uses these timestamps to track that frequency. Thus, Pang does not teach or suggest tracking "how often" the event that the timestamps represent occurs, regardless of what that event is.

Thus, Pang does not teach, disclose, or suggest "tracking how often said data buffers associated with said data structure are determined to be full" as recited in Claim 1. Thus, Claim 1 is patentable over Pang.

Claims 4-6 depend from Claim 1 and therefore include all of the distinguished features of Claim 1. Thus, Claims 4-6 are patentable over Pang for at least the reasons given above with reference to Claim 1.

Claims 13 and 16-18 recite computer-readable media that carry instructions for causing one or more processors to perform the methods of Claims 1 and 4-6, respectively. Therefore, it is respectfully submitted that Claims 13 and 16-18 are patentable over Pang for at least the reasons given above in connection with Claims 1 and 4-6, respectively.

CLAIM REJECTIONS—35 U.S.C. 103

The Office Action rejected Claims 2, 3, 7-9, 11, 12, 14, 15, 19-21, 23, and 24 under 35 U.S.C. 103(a) as being unpatentable over Pang in view of information disclosed

in the Background of the present application ("the Background"). The rejection is respectfully traversed.

Claims 2, 3, and 7-9 depend from Claim 1. As a result, Claims 2, 3, and 7-9 contain the features of Claim 1 that are distinguished from Pang above. The Office Action does not even allege that the Background discloses the features of Claim 1 that are distinguished from Pang above.

Thus, neither Pang nor the Background teaches, discloses, or suggests "tracking how often said data buffers associated with said data structure are determined to be full" as contained in Claims 2, 3, and 7-9 by virtue of their dependence from Claim 1. In order for a *prima facie* case of obviousness to be established under 35 U.S.C. 103, the combined references must, at least when considered in combination, teach or suggest all of the features of the claims that are alleged to be obvious. Even assuming, arguendo, that Pang and the Background could be combined, Pang and the Background still do not teach, disclose, or suggest all of the features of Claims 2, 3, and 7-9. Thus, Claims 2, 3, and 7-9 are patentable over Pang and the Background, taken individually or in combination.

Claims 14, 15, and 19-21 recite computer-readable media that carry instructions for causing one or more processors to perform the methods of Claims 2, 3, and 7-9, respectively. Therefore, it is respectfully submitted that Claims 14, 15, and 19-21 are patentable over Pang and the Background for at least the reasons given above in connection with 2, 3, and 7-9, respectively.

Claim 11 recites, *inter alia*, "monitoring how often data buffers are **inserted** into a ready-to-write buffer list." The Office Action apparently analogizes the "ready-to-write buffer list" of Claim 11 to Pang's "flush list 222." The Office Action's rationale for

rejecting Claim 11 is essentially the same as the Office Action's rationale for rejecting Claim 1. The rationale is based on the log buffer timestamps.

However, as is discussed above with regard to Claim 1, the log buffer timestamps do **not** indicate the time at which the log buffers are **inserted** into flush list 222. Quite to the contrary, the log buffer timestamps appear to indicate the time at which the log buffers are **removed** (flushed) from flush list 222. As is discussed above, there is no correlation between the time that a log buffer is inserted into flush list 222 and the time that that log buffer is removed from flush list 222. Thus, even if Pang somehow discloses tracking how often log buffers are **removed** from flush list 222, Pang still fails to teach or suggest tracking how often log buffers are **inserted** into to flush list 222.

Thus, Pang does not teach or suggest "monitoring how often data buffers are inserted into a ready-to-write buffer list" as recited in Claim 11. Furthermore, the Office Action does not even allege that the Background discloses this feature of Claim 11.

Thus, neither Pang nor the Background teaches or suggests "monitoring how often data buffers are inserted into a ready-to-write buffer list" as recited in Claim 11. Even assuming, arguendo, that Pang and the Background could be combined, Pang and the Background still do not teach or suggest all of the features of Claim 11. Thus, Claim 11 is patentable over Pang and the Background, taken individually or in combination.

Claim 12 depends from Claim 11 and therefore includes all of the distinguished features of Claim 11. Thus, Claim 12 is patentable over Pang and the Background for at least the reasons given above with reference to Claim 11.

Claims 23 and 24 recite computer-readable media that carry instructions for causing one or more processors to perform the methods of Claims 11 and 12, respectively. Therefore, it is respectfully submitted that Claims 23 and 24 are patentable

over Pang and the Background for at least the reasons given above in connection with Claims 11 and 12, respectively.
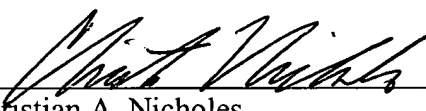
CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that all pending claims are patentable over the art of record, including the art cited but not applied. Accordingly, allowance of all claims is hereby respectfully solicited.

Respectfully submitted,

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